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Art. I.—CASE OF PNEUMONIA SUCCESSFULLY TREATED BY LARGE DOSES OF TARTAR EMETIC.

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Dr. Dunglison,

I was called on the 12th of September, 1840, to see Green, a negro boy, the property of Mr. Samuel H. Walker, of Rockingham county, N. C. The boy lives where the various types and grades of bilious fever are very prevalent; and this season the neighbourhood was exceedingly subject to bilious remittent. This boy had complained of feebleness and indisposition for some days previous to the 7th inst., which led to the belief that he was to be a subject of the disease then prevailing. On the 7th at night he was very active hunting, and in a profuse perspiration lay down on the ground late at night (which was nearly frosted) and slept till day. From this time he was prostrated. On the 12th, when I first saw him, he was labouring under typhoid pneumonia; these were the symptoms:—frequent cough, with no expectoration; pain on inspiration; and pain on pressure through the whole chest, particularly on the right side; breathing short and hurried; skin of a pungent warmth, and dry; occasional delirium, with that sharpness and quickness peculiar to such cases; pulse 120, rather small, soft, and feeble; bowels very active from having been purged too much before my arrival; tenderness of the epigastrium, with an irresistible desire to throw back his head; tongue thickly coated with yellow, of a fiery red beneath, and dry on the tip. Although I considered it doubtful whether I should take blood at the arm, yet the pulse appeared to have sufficient firmness to bear it. I bled him between 8 and 10 ounces; prescribed small portions of calom. and pulv. Dov. every two hours, and an expectorant and sedative mixture every four hours of spts. nitre, paregoric, and ipec., and applied a large blister, covering the epigastrium and lower part of the chest.

14th Sept., afternoon, saw him; something better, pulse 110, rather more full; delirium less; some expectoration, though very bloody and yellow; blister had drawn well, and bowels were more quiet; otherwise he was pretty much the same. Cupped him extensively round the chest, but did not get much blood from the want of free capillary circulation. Other prescription of the 12th continued.

15th, at night, sent for; much worse; pulse above 115, smaller and feebler; bowels again become very active; more constant delirium; remarkable shrinking away of the flesh; countenance haggard; expectoration small in quantity, painful, and of the same colour; tongue dry, one side where the fur had worn off, smooth, dry, and *glazed;* skin of that warmth termed

calor mordax. Cupped him again, without much blood; applied a blister over the right side of the chest; continued the other medicines, with lessening the cal. in the powders and increasing the ipec. in the drops.

16th. Remained over night; still worse; spent a restless night; pulse above 120, more contracted; constant delirium; idle talking and imaginary sights; still greater shrinking of the flesh; features sharp and haggard; hippocratic countenance; expectoration small in quantity and extremely bloody; tongue dry and parched, a portion of it smooth and *glazed;* articulation difficult; restlessness and jactitation; breathing short, with the tracheal rattle. In this state of things I should have pronounced him hopeless under the usual practice; his rapid decline since the 14th showed how futile my practice had been, and indicated, I thought, how utterly useless the ordinary practice would still be if pursued. In this dilemma what was to be done? The practice of giving repeated emetics, after the manner of Riviere and Stoll, and the Italian practice of giving large doses of tart. emet., so highly extolled by Laennec (the highest authority), occurred to me. He was, I thought, too feeble to pursue the former with the least hope of success, and there appeared to be as little hope of success with the latter. But the account of Laennec, in his chapter on Peripneumony, of his remarkable success in patients thought to be moribund, determined me to make trial of the latter remedy, without the least expectation that it would succeed. His usual practice was to give one grain every two hours till he gave six grains, then to rest twelve hours; but my recollection not serving me well on this point, I gave him *four* one grain portions at intervals of two hours, attending to its exhibition myself. After the two first grains he vomited once a considerable portion of green bilious matter; save this he took the four grains without any other evident effect but that of great sickness of the stomach. I left him this evening, ordering the same course to be pursued the next day, of giving the tart. emet. in an infusion of common tea, the best vehicle I had at hand, suspending all other medicines while doing this.

18th. Saw him at one o'clock; astonished at his improvement; pulse 85, more full and soft; cerebral congestion and delirium completely gone; countenance more natural; expectoration easy, and without pain; tracheal rattle gone; breathing more full and slower; tongue inclined to be moist; skin a more natural warmth; in short, every symptom showing a removal of cerebral congestion and resolution of inflammation in the chest.

Yesterday, the 17th, I was informed the tart. emet. purged him excessively, so as to produce syncope, and induce the attendants to believe he was dead. They gave him some laudanum and camphor, which checked his bowels and revived him; at the same time a slight moisture appeared on the skin. After prescribing a pill every four hours of opium, ipec. and calomel, with occasionally an expectorant mixture, I left him with the hope now that he would get well.

20th. Still improved; every symptom indicating convalescence. But on this day there appeared on the surface of his body a great many blisters about the size of a grain of corn, and larger; some contained a fluid clear as water, in others it was turbid; and there appeared under the angle of the left jaw a large tumour, which became an abscess, was ultimately lanced, and discharged a great quantity of matter. I left directions to keep his bowels regular, to use gentle friction with dry flannel; prescribed wine and wine whey and a proper diet.

24th. Saw him again; he had still mended. The course prescribed on the 20th pursued, under which he improved so much that he was able to walk across the house; when, on the 2d October, he was taken with epistaxis, and bled much till near night, when it was checked by cold applications to the neck, head, and scrotum. At one o'clock on the morning of the 3d it commenced again, and bled till four o'clock, P. M., when I saw him, having been absent from the county till then. He had bled a great deal, from the feebleness of his pulse and the disposition to syncope; his nose was then

dripping slowly. Sulph. acid. dilut. and a solution of sulphate copper was directed to be injected into the nose *pro re natâ*, and a pill of two grains sugar of lead and one fourth grain of opium given every two hours, which on the 4th succeeded entirely in stopping the hemorrhage.

8th Oct., prescribed friction with dry flannel; mild aperient pills when necessary; barks and wine, and properly regulated diet; and now, on the 20th Oct. the boy is well, and has but to get his flesh and strength.

In reviewing the progress of this case, I am struck with the efficacy of the tart. emet. treatment; and so far as one instance goes, it is a complete triumph of the practice. It appears that his system did *not* acquire *tolerance* of the medicine the two days of its exhibition; it vomited him once on the first day, and purged him copiously on the second, besides creating a slight perspiration.

Its effect had been sufficiently salutary I perceived on the 18th, and I gave no more. I will here quote a sentence from Laennec as apropos:

"Although copious purging and frequent vomiting are by no means desirable, on account of the debility and hurtful *irritation* of the intestinal canal which they may occasion, I have obtained *remarkable cures* in cases in which such evacuations had been very copious." This, then, was one of the favourable cases which never acquired tolerance of the article, and where the evacuations were copious. The treatment, indeed, snatched him from the grave. I have had numerous cases of pneumonia and pleurisy, and so far as my experience and the experience of other physicians with whom I have conversed show, every patient, when combining the symptoms of this boy's case on the 16th, has died.

The wonder is *now* that I never used it before. I never have, nor has any physician, to my knowledge, in this section of country. It would seem he was about to take the malarious fever there prevailing, but his exposure on the night of the 7th Sept. rendered the thoracic disease predominant,—in fact, made his a case of typhoid pneumonia. There was, when I first saw him, besides inflammation of the lungs and cerebral congestion, considerable *gastric irritation:* but thoracic and cerebral disorder were predominant throughout. In my view the stomach should not be much diseased when the tart. emet. is administered; the irritation in this case did not seem to be so great as to forbid its use. The only appearance of perspiration from the beginning of his sickness till his recovery was on the 17th, on the second day of taking the tart. emet., when he was so sick, and when—I omitted to state—some blood was discharged from his bowels. Might not the blisters which appeared on the 20th be intended by nature as a vicarious perspiration?—at any rate they were novel and unaccountable to me. I have been minute in drawing up this case, but if it shall be the means of saving one from the grave, I shall be amply rewarded. It is a practice but little followed, I believe, in the United States, but I trust it will command more general attention from physicians.

JAMES H. MAY.

ART. II.—MORBUS BRIGHTII.

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We pass on to the section of M. Rayer's commentary, in which the relation of this disease to other morbid states of the urinary organs are the subject of inquiry. The result of his experience on this matter is extremely important. "I have already," he says, "had occasion to point out frequently the striking analogies between simple and albuminous nephritis. The action of cold and damp produces both diseases. In the acute stage (with the exception of deposition of pus, which has either not been observed at all, or at

least very seldom, in Bright's disease,) the anatomical characters are identically the same,—the injection of the kidneys, their increased size, yellow discoloration, &c., are all appearances common to both maladies. In the most advanced chronic stage, the lesions are so precisely similar, that were it not for several circumstances connected with the progress of these affections, the absence or presence of dropsy, and the constant or only occasional presence of albumen in the urine, it would be impossible to distinguish them from each other." But, adds this author, there are striking points of distinction also between these diseases, the only one cited being the marked influence of morbid states of the remainder of the urinary passages or simple nephritis, while these are presumed to be without, or at least to have very slight, influence on the albuminous species. M. Solon considers simple nephritis distinguishable from Bright's disease by the absence of œdema, and the presence of renal pain, nausea, and vomiting. But it must be remembered that Bright's disease, as admitted by M. Solon himself, is not attended in all cases with anasarca, and the symptoms, mentioned as peculiar to simple nephritis, decidedly occur in the so-called albuminous variety. Dr. Christison's experience does not allow him to speak decidedly on the subject, "as simple nephritis is an extremely rare disease in Edinburgh." In the accuracy of the latter statement we see no reason for coinciding; it is a notorious fact that some years since, before renal pathology had excited the attention it has of late done, the persuasion of the rarity of nephritis was universal. We have ourselves heard most eminent Parisian pathologists affirm that they had scarcely ever seen an example of nephritis,—men who now in the short space of a session find abundant materials for lectures on the disease among the patients of a single ward. And again, how Dr. Christison managed to draw the inference from Rayer's works that that pathologist maintains atrophy to be peculiar to and distinctive of the *simple* chronic nephritis, we are at a loss to understand. So far is this from being the truth, that Rayer has actually figured five examples of atrophy as a dependence upon the disease described by Dr. Bright.

The reader is most probably acquainted with the case published by the late Dr. Gregory, (Ed. Med. and Surg. Jour., vol. xxxvi. p. 359,) as exemplifying the production of Bright's disease under the influence of lithotomy: the kidneys are represented to have been mottled, and to have contained internally a considerable quantity of granular matter. This is regarded by M. Rayer as an example of simple nephritis, an affection of most common occurrence under the circumstances described by Dr. Gregory: the mottled appearance is quite as frequent in the latter form of disease as in "albuminous nephritis;" and Rayer is of opinion that the granular matter must in reality have consisted of pus or plastic lymph. The case furnishes an excellent illustration of the necessity of minuteness and accuracy of detail, particularly with respect to subjects of novelty. Albuminuria after lithotomy by no means proves the existence of Bright's disease; Rayer has repeatedly discovered albumen and blood-globules in the urine of subjects suffering from *simple* nephritis and cystitis after that operation.

The correctness of Dr. Christison's diagnosis in several of his reported cases is contested, and not without apparent foundation, by the French pathologist. We have already mentioned that the first case in his work is regarded by M. Rayer as an example of simple nephritis, with typhoid symptoms; the truth is, that renal pathology is so little advanced that it would be presumptuous in us to attempt to decide between these discordant writers, at least in respect of the present question; yet we may be permitted to say, that to our minds there is an *a priori* force in M. Rayer's objection, from the fact that it is—or at least was formerly—too much the practice of Edinburgh to set down as typhoid fever every inflammatory affection attended with typhoid symptoms. Dr. Christison's third and eighteenth cases we fully agree with Rayer in considering examples of common inflammation affecting the bladder and kidneys, and wholly different from Bright's dis-

ease. And in his remark that Dr. Christison appears much too prone to infer the presence of granular disease from the occurrence of albuminuria, M. Rayer will, we apprehend, be joined by every one who impartially studies the work of the former. Again, the Edinburgh writer's nineteenth case refers to a subject who had abundant hemorrhage from the urinary passages followed by albuminuria, and is by the narrator considered an example of the special affection; while by M. Rayer it is esteemed an unequivocal instance of essential hæmaturia. Dr. Christison considers (apparently on the authority of Martin-Solon) that "in hæmaturia without granular disease, the urine ceases to contain albumen as soon as it ceases to present the colour of blood:" but his antagonist affirms that he has frequently found the urine in hæmaturia continue albuminous for some time after it had ceased to contain blood-globules, either in suspension or in its sediment.

M. Rayer considers diseases of the bladder, prostate, and urethra without influence on the developement of "albuminous nephritis," and has found that the latter affection rarely induces inflammation in the pelvis and ureters, and still more rarely in the bladder. He seems disposed, however, to admit that diabetes may have some influence in its production. Certain it is, that saccharine diabetes not very uncommonly passes into dropsy, with albuminous urine; but, though Dr. Bardsley declares (Cyclo. of Prac. Med., vol. i. p. 543,) he has observed the lesions of Bright's disease in subjects dying with diabetes, this is not a fact generally recognised, and M. Rayer reports a case (somewhat contradictory of his opinion on this subject stated in our former notice,) serving to show that, as has been alleged by others, the transformation of saccharine into albuminous urine may be a sign of amendment; if such be its import, it is difficult to suppose it an effect of the developement of Bright's disease.

The attention of the observers of this disease has been drawn to its frequent accompaniment by morbid states of the heart. Dr. Bright having found sixty-seven cases of cardiac affection (hypertrophy with or without valvular disease,) among one hundred of the renal disorganisation, infers, without making any inquiry into their relative priority, that the latter invariably acted as the cause of the former: he further undertakes to explain their mode of connection,—"either the altered quality of the blood affords irregular and unwonted stimulus to the organ immediately, or it so affects the minute and capillary circulation as to render greater action necessary to force the blood through the distant subdivisions of the vascular system,"—hence, it is presumed, the occurrence of hypertrophy: we are not informed how Dr. Bright has ascertained that morbid states of the blood produce necessarily the alleged effects, and it is obvious that affections of the valves are in this theory left altogether unexplained. Dr. Christison does not express himself very clearly or decisively as to the relation of the two states of disease, but does not adopt the curious conclusion that the cardiac are always secondary to the renal changes. M. Rayer infers from his own experience that in a very few cases indeed are the lesions of the heart an effect of those of the kidneys; he believes that Bright's disease is, on the contrary, very frequently produced by that of the central organ of the circulation, and has observed slight albuminuria, in subjects affected with hypertrophy or valvular lesions, gradually become intensely marked and attended with the most distinct evidences of the special renal affection. He adds, that albuminuria, existing in subjects labouring under disease of the heart or large vessels, with or without dropsy, is not pathognomic of Bright's disease; that, according to his experience, the urine of such patients may contain albumen, either from the kidneys becoming simply hyperæmic, or without their undergoing any apparent change whatsoever,—thus confirming the original statement of Dr. Darwall. He has even observed two cases of chronic pericarditis attended with discharge of albuminous urine towards the close of life, the kidneys appearing on dissection simply congested; and affirms that the derangement of the circulation consequent on endocarditis

may cause the escape of albumen with the urine in cases where no renal lesion of any kind exists.[1] In these instances, the high specific gravity of the fluid, and the larger proportion of lithates and of urea therein contained, are pointed out as peculiarities which distinguish it from the excretion in marked chronic cases of the renal disease.

All these writers coincide in their statements respecting the extreme frequency of bronchitis as a secondary disease. M. Rayer observed it in seven eighths of his cases. It is sometimes attended with very copious secretion (bronchorrhœa), and may coexist with vesicular emphysema, and lead to pulmonary œdema, or, it is affirmed, lobular pneumonia. Dr. Bright found "recent or old traces" of pneumonia in one ninth of his fatal cases; Dr. Christison has only observed this complication in two instances; M. Rayer in at least one twelfth of his patients. Reviewing the experience of the four writers, it appears that pleurisy—exclusive of cases in which it evidently depended on pulmonary tubercles or pneumonia—is an affection of rare occurrence in the course of Bright's disease, although the original describer of the latter affection has maintained a somewhat different opinion. The existence of old pleuritic adhesions does not appear to have been more common than in subjects dying of all diseases indiscriminately, with the exception of phthisis. Both Dr. Bright and M. Rayer point out the extreme frequency of pulmonary œdema: both have observed it in one third of fatal cases. But their experience differs respecting the connection of phthisis and the renal disease. Dr. Bright having rarely found them coexistent, and having noticed that in some cases tuberculous disorganisation appeared "to have made a certain inroad upon the upper lobes, and then to have sunk into a state of quiescence, or entirely subsided," is inclined to the persuasion "that so far from these diseases being *associated*, the condition of the body in this form of renal disease is unfavourable to the existence of phthisis." M. Martin-Solon adopts a similar notion. Dr. Christison, on the contrary, maintains that the renal affection sometimes occurs as a secondary disease in the course of phthisis; and M. Rayer advocates the same opinion, on the ground of his having observed every form of the disease—in many instances successively developed in the hospital—coexisting with pulmonary tuberculisation, manifestly of prior developement. He has also observed a certain number of cases in which pulmonary consumption appears to have arisen from the deterioration of constitution induced by Bright's disease.

"With regard to the liver and abdominal viscera generally," remarks Dr. Bright, "as compared with the heart and lungs, a very great immunity from structural disease is to be observed." In the tabular view of one hundred cases drawn up by this author, the liver is stated to have been healthy in forty cases, and in thirty-two others there was merely a mottled appearance, arising probably from disturbed circulation in articulo mortis: in eighteen only were there marks of confirmed disease. Now, as the subjects of these cases were, in the great majority of instances, any thing but sober persons, we have here an argument of no mean force against the prevalent conventionalism respecting the direct influence of intemperance on the liver,—an influence the amount of which has, beyond the shadow of a doubt, been monstrously exaggerated.[2] This result is the more important, as Dr. Christi-

[1] As mentioned in our previous article, Dr. Christison in his pleadings for the diagnostic importance of albuminuria, throws out doubts of the efficient information of the observers who professed that cardiac disease might induce this symptom. He would himself, we doubt not, be now disinclined to push this argument, as Dr. Carswell has meanwhile published an indubitable example of the fact in the Lancet; and M. Rayer reports at length the details of a similar case, in a chapter headed "Albuminous Nephritis similated by Disease of the Heart."

[2] The palmy days of liver pathology are happily gone by,—yet how many victims do we still see salivated almost unto the death for "obstinate hepatic inflammation," assuming the curious shape of pleurisy,—how many tuberculous subjects with wandering pleuritic pains are assured that "congestion about the liver" is the only obstacle to

son talks of conjunction of hepatic and renal disease being easily understood, *because* both are among "the infirmities of the *constitution of intemperance*." All species of lesion appear to be discovered indifferently in the liver in these cases; it occasionally contains granular matter, assimilated both by MM. Rayer and Christison to that developed in the kidneys.

The lesions observed in the other abdominal viscera and in the intestinal canal need not delay us,—a word, however, on one of the effects of these, diarrhœa. Dr. Christison, speaking of the frequency of this symptom among the Edinburgh sufferers from Bright's disease, wishes to impress his readers with the belief that diarrhœa is comparatively a rare secondary affection in other cities where "*the habitudes* of granular disease" have been made the subject of observation. He is informed by Dr. Bright that it "has never particularly attracted his notice in London," and assured by MM. Andral and Louis that in Paris affections of the bowels are not common. The alleged information from Dr. Bright is not easily reconcilable with the distinct written statement by this writer, that "diarrhœa has carried off several patients, (Guy's Reports, No. ii., p. 339); and as regards Paris, the experience of M. Rayer must be admitted to be more decisive on a question of the present kind than even that of the eminent persons just named; (it is besides not treating them fairly to take the statement here attributed to them *au pied de la lettre*, as misapprehension may easily arise in the verbal transmission of opinion); now, M. Rayer has observed diarrhœa in "upwards of half his patients,"—a diarrhœa remarkable for its intractability, and for its never lessening, no matter how violent it becomes, the amount of dropsical effusion:—far from this, the latter seems sometimes to increase *pari passu* with the former.

"Drowsiness and torpor are common symptoms throughout the whole disease from first to last," and so frequent are affections of the head, "more or less allied to apoplexy," of which death by coma seems the natural termination, unless life be cut short by some other incidental cause, that "it appears not quite correct to consider these affections as secondary." Does Dr. Christison here mean to affirm that such affections are more common than anasarca, which he unhesitatingly ranks with this category? The mode of progression of the torpid state which merges in irrecoverable coma, and proves the immediate cause of death in many cases, is sufficiently well known. Dr. Christison, however, in affirming without qualification that "this secondary affection may occur in the very earliest stage," broaches an opinion of debateable accuracy. At least M. Rayer has found this of singularly rare occurrence, except in cases where the disease follows scarlatina. Dr. C. has attentively studied the relation of the state of the urinary secretion to the cerebral symptoms, and though he admits the general correctness of the common belief respecting the dependence of the latter on suppression or extreme diminution of the former, yet he shows clearly that this is not an invariable fact: "I have known," he observes, "coma form and prove speedily fatal, when thirty ounces of urine were discharged daily up to the time of death; and in case No. 3, the patient passed no more than two ounces of light urine daily for nine days before death, yet he remained sensible to the very last moment of his existence." He has also found that coma is not necessarily connected with the extent or increase of dropsical effusion. In many cases terminating fatally in this manner, the brain and meninges, it is affirmed, present no trace of lesion,—a position which requires the confirmation of numerous and very minutely detailed cases before its precise truth can be admitted.[1] Dr. Osburne speaks of arachnitis as a

their enjoyment of health,—how often is gastric cancer modified into "mischief going on in the liver,"—and how easily might instances be multiplied in which this *favoured organ* forms the easy refuge of stolid cupidity.

[1] Of course we regard as mere nonentities cases in which the reader is obliged to content himself with the laconic statement—"brain healthy."

common species of disease under these circumstances; and Rayer of subarachnoid serous infiltration as the lesion most commonly discovered, along with occasional superabundance of fluid in the ventricles: from the fluid Dr. Barlow has obtained urea. Hemorrhage into the substance of the brain, into the ventricles, or the cavity of the arachnoid, have been noted by Dr. Bright; but, on the whole, lesions of this latter kind are so exceedingly rare, that M. Rayer is perhaps justified in doubting that there is any real dependence between the two states. The same must, *à fortiori*, be said of the "morbid tumours" discovered in the brain of one of Dr. Christison's patients, but respecting the nature of which "morbid tumours" the details, or rather the want of details, given by the author, scarcely permit even a guess.

M. Rayer has observed several examples of Bright's disease as the apparent effect of pregnancy. Some of these cases were remarkable for the facility with which the disease yielded after delivery to very simple treatment. In certain instances where the disease preceded, or was developed at an early period of pregnancy, it evidently interfered with the evolution of the ovum, and in cases published both by M. Martin-Solon and himself led to fatal abortion.

A very lengthy chapter is contributed by M. Rayer on the connection of "albuminous nephritis" and cutaneous diseases, of which the portion referring to scarlatina is alone really interesting. And in this, rendered heavy by needless prolixity, little is added to previous knowledge; even upon the most debateable point connected with the subject—the anatomical condition of the kidneys in patients suffering after that exanthema from anasarca and albuminuria—it supplies no original information: the latter omission appears to have arisen from a fortunate cause, the mildness of the affection at Paris. Yet it is fair to add that, by collecting the facts scattered through periodical and other works, M. Rayer has placed the reality of the occurrence of the successive stages of Bright's disease, under these circumstances, in a very clear point of view. The existence of dropsy, fever, and the presence of blood and albumen in the urine, which fluid is diminished in quantity and of low specific gravity, are the only safe signs of Bright's disease under these circumstances. Dropsy succeeding scarlatina by no means positively announces renal disorder; besides the possibility of its depending on disease of the heart or great vessels, general dropsy, unattended with coagulability of the urine, has been known to follow scarlatina, and nothing authorises us in ascribing such affection to a lesion of the kidneys,—a fact adverted to by Dr. Christison also in the same strain.

The experience of M. Rayer confirms the opinions of Drs. Hamilton and Christison respecting the influence of a scrofulous habit on the developement of the disease. A case is related by the French writer, in which the urine, though strongly albuminous, contained a large proportion of lithic salts; either the patient, in this instance, was affected with renal disease or not, (she left the hospital soon after her admission); but on either supposition, the constitution of her urine was remarkable: if she were not thus affected, by its abundant impregnation with albumen; if she were, by its full provision of urates. M. Rayer fancies that in this, and in some other similar cases, the proportion of lithates was influenced by the scrofulous habit of the patient.

From an examination of the cases published by Blackhall, Scudamore, and Bright, exemplifying the occurrence of albuminuria in gout, M. Rayer concludes that in some cases this phenomenon depends on the coexistence of Bright's disease, that in others its cause is unknown, but may possibly be "concomitant disease of the heart, or a modification of diabetes."

The duration of the chronic form of Bright's disease is exceedingly variable, and indeed defies exact calculation. In the first place, we can rarely feel satisfied of the accuracy of patients in their assurance that these symptoms commenced at this or that period,—not to speak of the uncertainty of

such commencement as a sign of the real outbreak of the affection. Nor, even after the sufferer has placed himself under medical care, can the ulterior duration of the disease be predicted with even tolerable certainty; if the presence of albumen in the urine have been ascertained, this throws no light on the period when dropsy may supervene; nor does the establishment of anasarca make the problem of ulterior duration of easier solution.

Authors appear to have established, much to their own satisfaction, the etiology of the disease. The exposure of the body to sudden changes of temperature, and especially to the simultaneous action of cold and damp, is set forth as the most common cause of the disorder, and as being particularly evident after scarlatina. If, however, this be the fact in acute cases—and we are not disposed to contest this—it may be doubted in respect of the chronic order. We have not only no hesitation in affirming with Dr. Christison that, "since in the generality of cases the disorder establishes itself silently and very gradually, its exciting cause must obviously prove for the most part inappreciable;" but we cannot help feeling persuaded that had he observed the caution, which he well states to be requisite, in taking for granted the reference often made by patients of their illnesses to cold, he would be disposed to admit, even more fully than he has done, our utter ignorance of the exciting causes of the disease. However, quasi-statistical facts are adduced by M. Rayer and others to support the current opinion;—he enumerates a head of trades, the followers of which, he alleges, are more prone to the disease than other persons. But in the first place, he seems to have collected under this host of trades, peculiarly exposing their followers to cold and damp, the most numerously peopled artisanships of Paris;—if they are stronger in numerical force, of course, in the natural course of things, they should furnish the largest quota of the disease in question.

Dr. Christison finds "the constitution of intemperance" a most important predisposing cause of the disease, and makes a nice distinction of the spirit-bibbers into those who are habitual drunkards, and those who constantly indulge to a large amount, yet never enjoy themselves so fully as to lose their perpendicular in consequence. But where is the proof that the persons belonging to either of these distinguished classes of society furnish the chief share of patients labouring under this renal disease? Has Dr. Christison, after carefully ascertaining the proportion of drunkards to sober persons supplying the inmates of the Edinburgh Infirmary, then compared the amount of renal disease furnished by each, and found the drunkards in a large majority? He dreams of nothing of the kind,—and hence his inference on the subject is, to say the least, utterly valueless in a scientific point of view; more especially as, unfortunately for the moral state of the lower orders of the town population of these islands, there are few among them who would not take rank in one or other of Dr. Christison's divisions. The curious in hypothesis will find much more to gratify their propensity in the volumes before us: but we believe we shall have the sager portion of the profession with us when we affirm that nothing of an accurate kind is known on the subject,—and that so it must remain until it be studied on very different principles from those followed by the ordinary constructors of etiological chapters.

The diagnosis of the disease next claims our attention. On a former occasion we entered very fully into the existing state of knowledge respecting the causes of albuminuria, and showed from the experience of the most eminent observers the extreme error of the notion—unfortunately even still too prevalent—that the mere presence of albumen in the renal secretion announces special disease of the kidneys. We shall now proceed to the examination of another point, namely, whether the amount or persistence of this impregnation is characteristic of this particular disorder, and what other qualities of that fluid may be thus characteristic. But first we must advert to a portion of Dr. Bright's most recent publication intimately connected with this subject. The chief motive of Dr. Bright in favouring the profession

with this new communication was "to furnish himself with an opportunity of explaining his views on one important point connected with *the* disease attending albuminous urine, in reference to which he has been singularly misunderstood." The presumed misconception under which Dr. Bright apprehends he has suffered is, that he maintains the occurrence of albuminous urine to be always and necessarily connected with "*that organic disease* which in its various shapes and modifications has been so fully described." The learned writer then proceeds to quote from his previous writings passages showing that he conceived the functional, preceding the organic changes, to be productive in some cases of the morbid condition of the urine in question. For our parts, we never entertained the opinion respecting Dr. Bright's notions which he is here so anxious to disclaim; but we did believe him to suppose that some condition, whether functional or organic, connected with the disease he has described, is the sole cause of albuminous impregnation,—and that he does even still maintain this, appears clearly from the passages just cited. We would point out, too, the curious fact, that in the expression "the disease attending albuminous urine," Dr. Bright appears to make the latter the cause of the former.

In the majority of cases, abundant and persistent impregnation of the urine with albumen is indicative of the presence of Bright's disease; but Dr. Morrison's case, formerly referred to, even if no other of the kind had been met with, would suffice to prove that such abundance is not a pathognomic sign. There are few cases, however, in which, if to such impregnation be joined deficiency of saline constituents and low specific gravity, the observer may not with confidence diagnosticate Bright's disease. Dr. Christison, though in the following brief summary showing how useful the characters of the urine may become in this respect, wisely cautions the practitioner against trusting to these alone, when he has it in his power to obtain additional information from other local and general signs, the secondary affections, &c. It will be perceived that in these propositions Dr. Christison again exhibits the peculiarity of his opinions respecting some points already referred to.

"1. When the disease has continued for a short time with acute symptoms, the characters of the urine—namely, a somewhat reduced density, a diminished amount of daily discharge of solids, and high coagulability—are invariable, and do not occur conjunctly, so far as is yet known, in any other disorder. 2. There is a very common conjunction of characters in the advanced stage, which has seemed to me never to occur in any other malady, namely, great reduction of density, some diminution of quantity, much diminution of the daily discharge of solids, and slight coagulability. 3. Another conjunction, not less characteristic, perhaps, is great reduction of density, slight coagulability, and a great increase in quantity, consequently with little or no diminution of the daily discharge of solids. 4. I have never in any circumstance, except in the advanced stage of granular disorganisation of the kidneys, met with urine about the natural standard in quantity, of the very low density of 1006 or 1008, consequently defective materially in the daily discharge of solids, almost colourless, or cherry-red, or smoke-brown, or orange-yellow, and obscured by opalescent muddiness, which does not disappear under rest or gentle heat—even though not coagulable. 5. Though not absolutely prepared to state the same proposition where the quantity of urine is superabundant, and its other qualities such as those last described, I am inclined to think this condition also characteristic." (p. 56.)

The supervention of anasarca gives great additional certainty to the diagnosis: Dr. Christison supposes that the characters of this anasarca will in themselves sometimes suffice for its establishment. He has not for nine years (the number of cases observed would have been a better criterion of the value of the statement,) met with a single case of inflammatory dropsy where there were not unequivocal signs of the kidneys being diseased: he admits, however, that there may, as before intimated, be some doubt whether

this is the fact in cases of dropsy consequent on scarlatina. A character frequently observed in the œdema depending on the renal disease is, that the part does not pit on pressure: Dr. Christison considers this peculiar to it. Again, "all dropsies where the urine is steadily above the healthy standard in point of quantity occur," according to this author, "in connection with granular kidney, except in the instance of dropsy attending the advanced stage of saccharine diabetes." He is also inclined to think, though on this point not prepared to speak with confidence, "that all dropsies where the urine not being above the healthy standard in quantity, is also below 1010 in density, are connected with granular disorganisation of the kidneys, whether the urine be albuminous or not."

In the acute stage of Bright's disease, when the urine is bloody and albuminous, and dropsy has not yet appeared, the case might be mistaken for essential hæmaturia, or that occurring in hemorrhagic purpura, or vice versâ; but in the latter, blood is voided in large quantities and in clots; one of the renal regions is commonly more painful than the other, and the qualities of the urine usually change in the course of twenty-four hours. Of the presumed distinction respecting transmutation into albuminuria, we have already stated the inaccuracy. We can add little to our previous statement of the difficulties attending the distinction of the incipient stage of Bright's disease; if dropsy be present, the case is clearly of the latter description; if this be absent, the diagnosis seems, except under particular circumstances, to be in the present state of knowledge impossible. The passive renal hyperæmia attending diseases of the heart is oftentimes with difficulty distinguished from the renal disorganisation; for although the albuminous urine of the former is generally of healthy specific gravity, and contains the normal amount of solids, yet it is occasionally much less dense than in health. Under the latter circumstances M. Rayer confesses that it is impossible to determine whether the dropsy and albuminuria depend on the cardiac malady alone, or on superadded renal disease. The œdema depending on the morbid states of the heart usually commences with the ankles, and even when advanced is diminished by the horizontal posture: that occurring during the disease of the kidneys frequently exhibits itself first about the face, and is little benefitted by the recumbent posture. On the distinctive marks of encephaloid and tubercle of the kidney M. Rayer has not yet spoken.

A few words may here be appropriately introduced relative to the presumed frequency of the disease. Those who have written most enthusiastically on the subject seem to us to have exaggerated this most remarkably, or at least, beyond all question, to have drawn their inferences from incorrect data. Take for example Dr. Bright, who, in order to ascertain its frequency, "instituted a series of experiments, by taking the patients promiscuously as they lay in the wards, and trying the effects of heat upon the urine of each, and at the same time employing occasionally other reagents." We need only refer the reader to the table given in our former article of the causes of albuminuria, and to what has been said in the foregoing pages, to convince him of the insufficiency of this sign as evidence of the presence of the disease, more especially when, as appears to have been the case with Dr. Bright's experiments, the specific gravity of the urine was not examined. Need we wonder that he found the proportion of persons labouring under the disease he has described "at least one in six, if not in four?" And here is the calculation referred to with commendation by Dr. Christison (Pref., p. 9,)—by Dr. Christison who elsewhere rejects, as an unfair interpretation of his opinions, the notion that albuminuria is pathognomic of the disease.

In a chapter entitled Pathogenesis, wherein M. Solon endeavours to trace the mode of formation of the morbid changes of the kidney, this observer states his belief that Bright's granulations are a product of interstitial exhalation, and not a degeneration. Valentin's conclusion on this point, drawn from the microscopical examination of the kidneys of a child in which the cortical substance was of yellow colour, and the external surface presented

spots of ash-gray tint, is of a very different kind. This micrologist found the uriniferous ducts and the substance separating them perfectly normal, and ascertained that the vessels presented no unusual appearance either in respect of their diameter or distribution,—in fact, that the renal tissue possessed its healthy characters. The yellow discoloration appeared produced by a quantity of matter of that colour filling the ducts of the cortical substance, and composed of small granulated patches, of irregular and variable shape, and of yellow roundish globules. The tubuli of the tubular substance contained matter of the same kind, but in much less quantity. From these observations Valentin infers that the disease does not affect the tissue of the kidney, that this is in truth unchanged, and merely the receptacle of urine of modified properties: and hence that the albuminous state of the urine is in reality the cause of the deceptive appearance of disease in the renal tissue, instead of being the effect of renal disorganisation; he further infers that a morbid change of the blood leads to that of the urine. Whatever confidence the name of Valentin may warrant in the accuracy of this description, the reader will not forget that it is derived from a single observation of one form only of the disease, and therefore decidedly requires confirmation. Nor does this confirmation appear likely to be soon obtained—at least the inquiries of Gluge seem to have led to the very different result, that the disease essentially consists in a deranged state of the capillary circulation of the cortical substance, and especially of Malpighi's glands.

Is Bright's disease an inflammatory affection? In commenting formerly upon the term albuminous nephritis, employed by M. Rayer to designate the malady, we admitted the extreme probability that such was the fact, and the details of this author's present volume very distinctly show, as it appears to us, that such is the truth. "There is no disease," observes M. Rayer, "in the course of which the phlogistic diathesis is more distinctly marked, none wherein it manifests itself in a greater variety of situations or under a greater number of forms. . . . In the first stage of the disease, the kidney is red, swollen, and sometimes painful; and, if we are unable to ascertain whether it be hot, we are at least certain that the changes it has undergone are productive of fever." If the inutility of the antiphlogistic treatment during the advanced stages of the disease, and its want of influence over its chronic anatomical forms generally, be urged in objection to this doctrine, we reply with M. Rayer, that such is the character of the consecutive lesions of all inflammatory affections. Will bleeding remove the intestinal ulcerations and indurations of chronic dysentery—the false membranes and puriform effusion of chronic pleurisy? And, because venesection is unavailing for this purpose, shall we expunge dysentery and pleuritis from the list of inflammations? Precisely the same line of argument may be adopted in answer to those who urge that the disease occasionally commences without active signs of inflammatory action. The qualificative "albuminous" cannot, in strictness, be reserved, as already stated, for this special form of inflammation, because simple nephritis is also attended with albuminuria.

With respect to the manner in which albuminous impregnation is produced, we need scarcely say that Valentin's notion is not that generally admitted, and that the majority of writers believe the renal disease to be the cause of that impregnation. But how are the two phenomena connected? If, as M. Solon observes, we suppose that the morbid condition of the tissues causes the serum of the blood to pass by simple transudation into the urinary passages, it may be objected that were this the case, the renal excretion should carry with it the other constituents of the blood also, which is by no means the fact. It contains no fibrine, and may hold colouring matter in suspension only temporarily, or in many cases not at all. Besides, if the serum of the blood escaped in the manner supposed, the liquid portion of the fluid remaining in the circulating system should be proportionally less abundant than natural: now the very contrary is the truth,—its relative quantity is greatly beyond the normal standard. M. Solon considers it more probable

that the morbid state of the urine results from imperfect elaboration of the materials upon which the kidney acts in the normal state; in confirmation of this view he cites the presumed fact, that the more complete the disorganisation of the kidneys, the greater the quantity of albumen discharged with the urine; but, as already mentioned, the accuracy of this fact is altogether denied by Dr. Christison. The subject is plainly still open to inquiry.

Again, assuming as a position, which will be readily granted, that the anasarca is in direct dependence on the morbid state of the kidney, it may be enquired what is the mode of connection between them. Sabatier and Martin-Solon seem inclined to believe that it depends on the increased proportion of serum in the blood, and on its greater tenuity, the experiments of Magendie having proved that the facility of exhibition increases with the tenuity of fluids. Dr. Christison fancies that his experiments on the constitution of the blood lend force to this theory. It is, however, completely overturned by two facts thus stated by M. Rayer: "We know for a certainty, on the one hand, that patients affected with albuminous nephritis after scarlatina rapidly become dropsical, before any considerable quantity of albumen has been discharged with the urine; and, on the other, that individuals labouring under the endemic hæmaturia of tropical climates void albumen for years, sometimes during their entire lifetime, without becoming dropsical." (p. 608.)

Dr. Christison devotes twelve pages to the consideration of the prognosis of Bright's disease, examining successively the chance of recovery from the fundamental malady, the probability of relief from the secondary affections, and the particular symptoms which indicate approaching amendment or the contrary. With respect to the first of these points, cases of acute and chronic character must be considered separately. The former appear to be as certainly curable, as the latter, so far as present knowledge permits us to affirm, is beyond the reach of art. The chronic forms of the disease are, sooner or later, in truth, almost invariably fatal,—but the fatal event may be averted to—we are almost justified in saying—an indefinite period, provided anasarca have been completely removed, and the patient carefully avoid all excess of every description and rigorously live according to hygienic rule. With these precautions, a life of very tolerable comfort, with freedom from every direct effect of the disease except albuminuria, may be generally ensured. Respecting the secondary disorders, it is sufficient to say in general terms that they are distinguished for obstinacy, with the exception perhaps of dropsy, which is generally observed to diminish considerably or disappear in patients of the lower orders, who exchange the slavery, privation, and disorder of their ordinary life for the ease, comparative luxury, and regularity of an hospital: to this change, at least, may be attributed much of the good effect produced, much more than the criers-up of the various and often opposing modes of treatment under which it has been observed to occur are likely to be willing to admit. As to the special symptoms announcing amendment, or the contrary, we must be prepared, from what has already been said on the differences of opinion regarding the relation of the modifications of the urine to the stages of the disease, for want of unanimity between the authors. Dr. Christison, of course, considers "the risk to life by no means proportioned to the amount of albumen in the urine, and that the reverse holds true in some measure." Rayer, Martin-Solon, and all those who maintain that the quantity of albumen increases with the advance of disorganisation, must of course hold an opposite persuasion. And it is remarkable, that M. Rayer seems to think that the fact of the urine containing a small proportion of albumen would place the patient "in perfect security," were it not that, under such circumstances, death has been known to occur suddenly from intercurrent affections of the lungs or brain. Dr. Christison, however, qualifies the above statement very considerably in the following observations: "If attended with a moderately high or gradually increasing

density of the urine, whether with or without an increase in its quantity, the diminution and disappearance of albumen are favourable signs. But this will, on the contrary, rather indicate a gradual advancement of the disease, if the density of the urine should at the same time slowly decrease, especially where its quantity remains stationary. Diminution of the albumen, with increased quantity and diminished density, cannot be relied on as a prognostic on either side." On the whole, the patient's danger would appear to be in proportion to the lowness of the density of the urine, unless the quantity of daily discharge is considerably above the standard.

Respecting the treatment of the disease in the acute stage, authors are highly unanimous. Antiphlogistic remedies of active character are recommended by all,—and, of course, the most important of these, blood-letting. "When there is no contra-indicating circumstance from age or constitutional infirmity, whether original or acquired, the extent to which bleeding is carried should," according to Dr. Christison, "be regulated, as to extent and repetition, by the same rules which govern its employment in ordinary inflammations." This writer gives a hint of no mean utility, in enjoining careful examination of the blood drawn, more especially in respect of its colouring matter; by the proportion of the latter, he conceives, the degree of advancement of the structural changes in the kidneys may generally be ascertained; and if it should appear from the low proportion of colouring matter that the disease is not in its early, but in some one of its more advanced stages, and hence the acute symptoms are not strictly primary, depletory measures should be pursued with much greater caution than under the contrary circumstances. The invariable accuracy of this mode of ascertaining the amount of progress of the disease may be doubted. Local abstraction of blood by cupping or leeching the renal regions, and the application of large linseed-meal poultices, are recommended by Drs. Bright, Barlow, and Rayer. The warm bath—if used beside the patient's bed—is advised by the same practitioners.

The restoration and maintenance of the cutaneous perspiration is one of the most important points to be attended to in the treatment of this affection, according to the testimony of the majority of those who have written upon it. Hence the value of keeping the patient in an equable and tolerably elevated temperature: so important is this, that we find Dr. Bright, who confines his patients closely to bed during the entire duration even of a protracted treatment, ascribing increase of anasarca to the passage of the cool air allowed to circulate through the wards over the bed-clothes of the patients. The use of flannel clothing is indispensable. Diaphoretics are advised in this stage by the majority of writers, and after the employment of more active remedies are probably useful; but the best diaphoretic treatment is here, as in inflammatory affections generally, the antiphlogistic. Dr. Osborne's views respecting the administration of medicines of the class just referred to, have been too long before the profession to require discussion at our hands.

The notions of Dr. Barlow on this point, though briefly alluded to in one of Dr. Bright's early papers, having for the first time been fully explained in the last number of the Hospital Reports, may be here more fully alluded to. This physician, he informs us, struck with the slowness of recovery of patients treated by the ordinary plan of bleeding, &c., was induced to seek for some more effectual method of removing the disorder. Persuaded of the inflammatory nature of the complaint, he determined upon a trial of tartarised antimony; and the results have, he assures us, as usually happens with the devisers of novelties in therapeutics, fully answered his expectations;—and several cases, which at least prove that recovery will take place under the use of this medicine, are related. Some of these are valuable in a pathological point of view, as further contributing to prove the identity of the renal disease occurring after scarlatina with the affection described by Dr. Bright, and as exhibiting the tractableness of the complaint when really

occurring with the character of an acute disorder in adults. But the reader must not imagine that Dr. Barlow confines himself to the exhibition of tartarised antimony in diaphoretic doses,—this appears a mere adjunct in the treatment, and the precise share of the sum of benefit obtained which is to be attributed to it cannot very easily be established. Dr. Barlow "would not merely recommend tartar emetic in the acute form of this disease on account of its diaphoretic properties, but on account of its power of lowering the heart's action, as well as its local effects upon the capillaries when it reaches them through the circulation." If the pulse be hard and full, the medicine may be given in nauseating doses,—if not, smaller doses are sufficient. Whatever share of converts Dr. Barlow shall eventually make to the propriety of his modification of the diaphoretic mode of treatment, it is certain that the latter is far from being held in general estimation. Rayer, whose expectations of benefit from its employment have been "rarely realised," has found that the effects of even the most powerful agent for producing perspiration—the simple or medicated vapour bath—have rarely been maintained beyond a few hours after each bath. Dr. Christison observes: "I have often resorted to the diaphoretic plan, sometimes with evident advantage, *much more generally* without success; and I must likewise add, that I have several times seen general perspiration, both spontaneous and from the use of diaphoretics, fail to produce any material relief." Yet, singularly enough, we are told in the next sentence "that no one can question the general propriety of the diaphoretic *method of cure*."

The advisability of diuretic medication in this complaint is likewise matter of dispute. Dr. Osborne thinks that, so far from being useful, it may actually produce the disease; Dr. Bright has little confidence in it; Dr. Christison, on the other hand, "has very seldom witnessed decided diminution of the dropsy unless where diuretics [diuresis] or purging was either artificially induced at the same time or arose spontaneously." This practitioner has particular confidence in digitalis and cream of tartar.

We should have felt desirous of examining briefly the peculiarities of treatment required in respect of the diseases termed secondary in this affection, but we find we have exhausted our space.

M. Rayer's volume terminates with an historical sketch, occupying one hundred pages, of the rise and progress of knowledge respecting the remarkable disease which has been under consideration,—or, we should rather say, respecting its detached phenomena. In this most erudite dissertation, the laborious author traces the germ of our acquaintance with the subject in the very earliest writers: first, in regard of the connection of dropsy and disease of the kidneys; secondly, of dropsy and coagulability of the urine. Nothing can be rendered more clear from this survey of the contributions of our progenitors than the great merit of Dr. Bright, and that this principally consists in his having detected the connection between these *three* conditions.

BIBLIOGRAPHICAL NOTICE.

Edwards's Outlines of Anatomy and Physiology.[1]

The value which we have placed on this preliminary treatise to his work on Natural History by Dr. Edwards, is shown by the circumstance that we have urged upon more than one person to translate it into English; and an English version by one of our learned physicians was actually advertised in the Philadelphia prints. It is a valuable compendium for the tyro and for the general reader, and is elucidated by numerous woodcuts.

The translator appears to have executed his office well.

[1] Outlines of Anatomy and Physiology, translated from the French of H. Milne Edwards, Doctor of Medicine, Professor of Natural History at the Royal College of Henry IV. &c. By J. F. Lane, M. D. 8vo, pp. 312. Boston, 1841.

Jefferson Medical College.—Catalogue of Graduates, Session 1840–41.

Names.	Subjects of Theses.
Henry G. Adams, N. Y.	Phlegmasia Dolens.
John B. Ball, Va.	Intermittent Fever.
William B. Ball, Va.	Tetanus.
Joseph B. Barclay, Pa.	Uterine Hemorrhage.
Wellington Bird, Pa.	Scarlatina.
John C. Boyd, N. Y.	Indigestion.
J. R. Bowdoin, Va.	Typhus.
Joseph S. Beemer, N. J.	Amenorrhœa.
Zephaniah Butt, Pa.	Croup.
Moses B. Beers, Ct.	Science of Medicine.
John M. Clark, N. C.	The Art of Preserving Health.
John A. Chilton, Va.	Menstruation.
Robert W. Christy, Pa.	Tracheitis.
Peter F. Dillard, Va.	Cynanche Trachealis.
Irby Dunklin, S. C.	Acute Rheumatism.
James E. Ellis, Va.	Scarlatina.
George C. Finch, N. Y.	Menstruation.
Richard H. Gambill, Va.	Icterus or Jaundice.
John B. Grayson, Va.	Croup.
J. P. Green, Mass.	Burns.
J. Fletcher Gay Lord, N. C.	Endemic Diseases.
Wesley R. Gearhart, Pa.	Cynanche Trachealis.
Charles A. Harding, Md.	Uterine Hemorrhage.
Charles H. Hedges, N. J.	The Circulation of the Blood.
James W. Hudders, Pa.	The Modus Operandi of Medicines.
A. Alexander Howell, N. J.	Mental Derangement.
Chaplin J. Hays, Md.	Acute and Chronic Rheumatism.
Andrew Hepburn, Pa.	Diseases of the Heart.
William J. Harris, Va.	The Spontaneous Introduction of Air into the Veins.
Frederick W. Isbell, Va.	Poisoned Wounds.
W. Brook Jones, Wash., D. C.	Rheumatism.
William B. Knox, N. C.	Apoplexy.
John Y. Lind, Md.	Acute and Chronic Bronchitis.
James C. Lee, Pa.	Articulation of the Teeth.
J. Stuart Leech, Pa.	Obstetrics, its Particular Claims on the attention of the Student.
William E. Mulhallon, Pa.	Impotentia.
Richard S. Maupin, Va.	The Circulation of the Blood.
James M. A. Muschett, Va.	Typhus Fever.
Thomas M'Farland, Va.	The Pulse.
John M'Creery, Pa.	Position as a Therapeutic Agent.
Benjamin T. Neal, Jr., Pa.	Baths.
Joseph Oyster, Pa.	Pneumonitis.
William J. Smith, Ga.	Erysipelas.
Samuel A. Sterret, Pa.	The Importance of Medical Science.
John Tomlinson, Pa.	Mammary Abscess.
Pierre G. Tourangeau, Quebec.	L'Icterus.
William W. Watson, Pa.	Puerperal Fever.
Hamilton F. Whitney, Pa.	The Gastric Organ.
Myron W. Wilson, N. Y.	The Capillary System.
John G. Wilson, Md.	Acute Pleuritis.
Harrison G. O. Winslow, Mass.	Phthisis Pulmonalis.
Charles O. Waters, N. Y.	Correct Diagnosis.
A. L. Williams, Ct.	Bronchitis.
Henry H. Wheeler, Pa.	The Progress of Cerebral Physiology.
Josiah P. Woods, Va.	Acute Bronchitis.
Allen N. Woolverton, U. C.	Indigestion.

The honorary degree of Doctor of Medicine was conferred on Dr. Samuel Anderson, of Delaware county, Pa.